



# SERVICE BULLETIN

from: TRIO-KENWOOD COMMUNICATIONS, INC.

TR-9000

#849

SUBJECT: TR-9000 Transmitter Sideband Carrier Balance

DATE 7/30/81

Distorted sideband transmission may have one of two causes. If normal alignment does not cure the problem, distortion or poor carrier suppression may be improved by rerouting two leads in the wire harness.

## PERFORM THESE INITIAL CHECKS FIRST:

1. On early units, ascertain that R74,  $47\Omega$  is present on the TX unit X56-1370-10 between connector 33, the LT line, and R27,  $2.2K\Omega$  (vicinity of Q5, Q6), and that R27 is  $2.2K\Omega$ . (Service Bulletin #824).
2. Verify TR-9000 Service Manual alignments, General section steps 4 (PLL), and 5 (HET frequency alignment).
3. TX section, steps #4 (power adjustment), 9 (SSB mic gain), 10 (carrier point) & 11 (carrier suppression).

## PROCEDURE:

1. Remove the bottom cover and unplug the speaker.
2. With the radio upside down and facing forward, locate connectors 8 and 10 at the front of the RX unit X55-1260-00. Connector # 8, pin 3 (violet) is the -6V DC line from the TX unit, connector # 31, pin 1. Connector # 10, pins 7 (signal) and 8 (ground) (green coaxial cable) is the MS pins 5 (sig) and 4 (gnd).
3. Carefully cut the cable ties (without cutting any leads) securing these two lines in the wire harness which runs to the left, around the upright Control unit, and then right behind the front panel as far as the Mode switch.
4. Carefully unplug each of these connectors by gripping the connector housing with a long-nosed plier.
5. Extract the terminal from the housing by depressing the locking tab and simultaneously withdrawing the lead with terminal. (see illustration on page 2).
6. Reroute these two lines from the behind the Mode switch, between the chassis and control unit, then left to their original connectors. Reinstall the terminals in their original positions in the connector housing.
7. Coil the excess of each lead and secure with cable ties. Retie the harness behind the front panel, along the left of the chassis, and back behind the control unit.

8. Readjust carrier suppression. Mod SW:USB, Mic terminal terminated with  $470\Omega$ . On the RX unit, alternately adjust TC1 & VR6 for minimum output at 145MHz. Carrier should be at least -40dB down.
9. Work is complete. Replace the bottom cover.

